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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/768,003 | 01/24/2001 | Shinichi Takahashi | Q62765 | 9261 |

7590 10/04/2005
SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC
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Washington, DC 20037-3202

EXAMINER

CHU, KIM KWOK

| ART UNIT | PAPER NUMBER |
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2653

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/768,003

Applicant(s)

TAKAHASHI, SHINICHI

Examiner

Kim-Kwok CHU

Art Unit

2653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Amendment filed on July 11, 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 13-17 and 19-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-17 is/are allowed.
- 6) ☒ Claim(s) 1-6, 19-22 and 26 is/are rejected.
- 7) ☒ Claim(s) 23-25, 27 and 28 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Response to Remarks

1. Applicant's Remarks filed on July 11, 2005 have been fully considered but it is not persuasive.

Applicant states that the prior art of Uchizaki's light source 31 is "not positioned such that a straight line connecting respective light emitting points of the beams L1 and L2 is coincident with a tangential line of a track on the disc 18 or 19" (page 11 of the Remarks, lines 17-19). Accordingly, a track such as Uchizaki's is a circular line surrounding the light emitting source, there are infinite tangential lines created by the circular track and the lines are distributed in 360 degrees around the emitting source. In other words, respect to Uchizaki's Figs. 2A and 2B, there exists a point on the circular track which has a tangential line parallel to the Y direction of the connecting lines of the emitting source 31.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

*A person shall be entitled to a patent unless --
(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.*

3. Claims 1-6 are rejected under 35 U.S.C. § 102(e) as being anticipated by Uchizaki et al. (U.S. Patent 6,646,975).

Uchizaki teaches an optical pickup apparatus for reading information from a plurality of types of discs at different reading wavelengths having all of the elements and means as recited in claims 1-6. For example, Uchizaki teaches the following:

(a) as in claim 1, a light source 31' having a plurality of integrated light emitting portions 31A, 31B for emitting laser beams of different wavelengths (Fig. 7A);

(b) as in claim 1, the light source 31' being adapted to selectively emit one of the laser beams of different wavelengths (Figs. 3B and 7A; column 9, lines 58-66);

(c) as in claim 1, a photodetector 35' for detecting the laser beam (Fig. 7A);

(d) as in claim 1, an optical system 15 for directing the laser beam emitted from the light source 11 to the disc 18, 19 (Figs. 1 and 8);

(e) as in claim 1, the optical system 15 for directing the laser beam reflected by the disc to the photodetector 35 (Figs. 2A and 2B);

(f) as in claim 1, the light source 11 is positioned such that a straight line connecting respective light emitting points of the plurality of light emitting portions is coincident with a tangential line (parallel, along) of a track on a disc to be reproduced (Fig. 1; the light beam emitted from the source 11 is parallel to the tracks on the disc);

(g) as in claim 2, the optical system 15 includes an astigmatism element 33 for providing the laser beam with astigmatism (Figs. 1, 3A, 3B; column 10, lines 50-53; hologram 33 having diffractive grating creates astigmatism on the photodetector 35);

(h) as in claim 2, the photodetector 35' includes a plurality of four-division light receiving sections 35A, 35B arranged corresponding to each of the plurality of laser beams of different wavelengths, and is configured such that central division lines of the four-division light receiving sections are in alignment with one another (Figs. 7A and 7B);

(i) as in claim 2, the photodetector 35' is disposed such that the central division lines are coincident with the tangential line of the track (Figs. 7A and 7B; reflected light spots are received at the center of the photodetecting elements);

(j) as in claims 3 and 5, the optical system 15 includes an astigmatism element 33 for providing the laser beam with astigmatism, and a diffraction element 33 for generating a pair of sub-beams from the laser beam (Figs. 3A and 31B; column 9, lines 40-57);

(k) as in claims 3 and 5, the plurality of four-division light receiving sections 35A and 35B are arranged in correspondence to each of the plurality of laser beams of different wavelengths, and further arranged such that central division lines thereof are in alignment with one another (Figs. 7A and 7B);

(l) as in claim 4, the optical system 15 includes an astigmatism element 33 for providing the laser beam with astigmatism, and a diffraction element 33 for generating a pair of sub-beams from the laser beam (Figs. 3A and 3B; column 9, lines 40-57);

(m) as in claim 4, the plurality of four-division light receiving sections are arranged in correspondence to each of the plurality of laser beams of different wavelengths, and further

arranged such that central division lines thereof are in alignment with one another (Figs. 7A and 7B);

(n) as in claim 4, the subbeam receiving sections are formed with regions which can receive all sub-beams generated from all the laser beams of different wavelengths emitted from the light source (Figs. 7A and 7B);

(o) as in claim 5, two divisional regions of the four-division light receiving section for receiving an arbitrary laser beam serve as two divisional regions of a four-division light receiving section for receiving a laser beam of a different wavelength from that of the arbitrary laser beam (Figs. 7A and 7B; divisional regions of each section 37A or 37B receive its respective sub-beams);

(p) as in claim 5, the remaining two divisional regions other than the two divisional regions are also used as a sub-beam receiving section for receiving said sub-beam (Figs. 7A and 7B; divisional regions of each section 37A or 37B receive its respective sub-beams); and

(q) as in claim 6, the light source is a one-chip laser diode which is formed with one electrode 235 as a common electrode for the plurality of light emitting portions (Fig. 9; column 15, lines 7 and 9).

3. Claims 19-22 and 26 are rejected under 35 U.S.C. § 102(e) as being anticipated by Uchizaki et al. (U.S. Patent 6,496,469).

Uchizaki teaches an optical pickup apparatus for reading information from a plurality of types of discs at different reading wavelengths having all of the elements and means as recited in claims 19-22. For example, Uchizaki teaches the following:

(a) as in claim 19, a light source 31 that selectively emits one of a first laser beam and a second laser beam as a selected beam, wherein the first laser beam has a different wavelength than the second laser beam (Fig. 2; column 5, lines 26-31);

(b) as in claim 19, an optical system 33 that directs a first main beam, which corresponds to the selected beam, to a first four-division photodetector 35A, and that directs a first sub-beam, which corresponds to the selected beam to a first sub-photodetector 35C, 35B (Figs. 3A, 3B);

(c) as in claim 19, wherein a first straight line passing through a first optical axis of the first laser beam and through a second optical axis of the second laser beam is parallel to a tangential line of a track of a disc to be reproduced by the optical pickup apparatus (Fig. 16; tangential lines of a track are 360 degrees surrounding the laser source 31);

(d) as in claim 20, the first straight line is perpendicular to the first optical axis and the second optical axis (Fig. 16);

(e) as in claim 21, a second straight line passing through the first four-division photodetector 35A, and the first sub-photodetector 35B, 35C is parallel to a tangential line of a track on the disc (Figs. 2 and 16; tangential lines of a track are 360 degrees surrounding the laser source 31 and the photodetectors 35);

(f) as in claim 22, a second four-division photodetector 36A and a second sub-photodetector 36B, 36C (Figs. 2, 3A); and

(g) as in claim 22, the optical system 33 directs a second main beam, which corresponds to the selected beam, to the second four-division photodetector 36A and that directs a second sub-beam, which corresponds to the selected beam to the second sub-photodetector 36B, 36C (Figs. 3A and 3B).

4. Claim 26 has limitations similar to those treated in the above rejection, and is met by the reference as discussed above.

Allowable Subject Matter

5. Claims 13-17 are allowable over prior art.

6. Claims 23-25, 27 and 28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7 The following is an Examiner's statement of reasons for the indication of allowable subject matter:

As in claim 13 the prior art of record fails to teach or fairly suggest an information recording apparatus having the following features:

(a) an optical system that generates a main beam and two sub-beams from a selected laser beam of the first and second laser beams and directs the main beam and the sub-beams towards an object disc;

(b) a first four-division photodetector;

(c) a second four-division photodetector. wherein the first and second four-division photodetectors are arranged such that central division lines of said first and second four-division photodetectors are in alignment with one another and coincident with a tangential direction of a track of the object disc;

(d) a first sub-photodetector disposed on one side of the first and second four-division photodetectors in a direction along which the central division lines extend;

(e) a second sub-photodetector disposed on another side of the first and second four-division photodetectors in the direction along which the central division lines extend; and

(f) an optical system directs a main beam reflected from an object disc to a corresponding one of the first and second four-division photodetectors and directs the sub-beams reflected from the object disc to the first and second sub-photodetectors.

As in claim 23, the prior art of record fails to teach or fairly suggest an information recording apparatus having the following feature:

(a) second straight line passes through the first four-division photodetector 35A, the second four-division photodetector, the first sub-photodetector, and the second sub-photodetector.

As in claim 27, the prior art of record fails to teach or fairly suggest an information recording apparatus having the following feature:

(a) the first four-division photodetector, the first sub-photodetector, the second four-division photodetector, and the second sub-photodetector are aligned in an order the first sub-

photodetector, the first four-division photodetector, the second four-division photodetector, and the second sub-photodetector.

The features indicated above, in combination with the other elements of the claims, are not anticipated by, nor made obvious over, the prior art of record.

Conclusion

8 The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ijima et al. (6,597,642) is pertinent because Ijima teaches an integrated laser source having two laser emitters with different wavelengths.

9 **Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).**

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Response to this action should be mailed to:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Or faxed to:

(571) 273-8300 (for formal communications intended for entry. Or:

(571) 273-7585, (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Any inquiry of a general nature or relating to the status of this application should be directed USPTO Contact Center (703) 308-4357; Electronic Business Center (703) 305-3028.

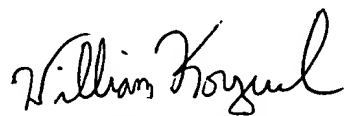
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kim CHU whose telephone number is (571) 272-7585 between 9:30 am to 6:00 pm, Monday to Friday.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kim-kwok CHU
Examiner AU2653
September 29, 2005

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9/29/05


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